

SIMTEK6879

IN THE UNITED STATES PATENT OFFICE

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CENTRAL FAX CENTERIn re Application of
Masao Koriyama

App. No.: 10/708560

JAN 07 2006

Filed: 3/11/2004

Conf. No.: 2559


Title: ENGINE CYLINDER BLOCK

Examiner: M. Gimie

Art Unit: 3747

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January 7, 2006


Ernest A. Beutler
Reg. No. 19901

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

APPELLANT'S BRIEFREAL PARTY IN INTEREST

In addition to the appellant, the real party in interest is his assignee, Kabushiki Kaisha YED, a Japanese company.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that would have a bearing on or be affected by the decision in this appeal.

STATUS OF CLAIMS

Claims 1 through 8 remain in this application and all are before the Board on appeal.

STATUS OF AMENDMENTS

No amendment was filed in response to the Final Rejection and hence all claims before the Board are as finally rejected.

SUMMARY OF CLAIMED SUBJECT MATTER

Appellant's invention relates generally to a cylinder block construction for an internal combustion engine and more particularly to a construction that lends itself to formation by a casting process whereby the block and particularly its cooling passages may be easily formed without the development of casting voids that would adversely affect the cooling of the resulting engine.

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Referring specifically to the basis for the claim language in the disclosure, independent claim 1 will be discussed in paragraph form pointing out the reference numerals employed to identify the claimed components and the areas of the specification by paragraph and line numbers where the components are described.

The claim defines "a cylinder block", identified generally by the reference numeral 23 and first described in Paragraph 0018 beginning in the first line of this paragraph. The cylinder block is "for an internal combustion engine" that is identified generally by the reference numeral 21 and first referred to in Paragraph 0016 of the specification. This cylinder block is comprised of a body portion indicated by the reference numeral 38 as described in Paragraph 0023 and has a lower, crankcase receiving portion and an upper, cylinder head receiving portion, both indicated by the reference numeral 39. The cylinder block body portion has at least one cylinder bore indicated by the reference numeral 24 first described in Paragraph 0022 formed therein extending between the lower and upper portions.

The cylinder bore or bores are surrounded at least in part by a coolant jacket identified by the reference numeral 42 and first described in Paragraph 0024. The cylinder block and specifically its cooling jacket is served by a cooling pump indicated by the reference numeral 43 and described first in Paragraph 0024.

This pump 43 is received a pump receiving portion formed at one side of said cylinder block as shown best in FIG. 7 and which includes the opening 55, described in Paragraph 0028, and has a communication passage, indicated at 57 communicating with the cooling jacket formed in said cylinder block through a discharge duct indicated at 56. This has an upper wall that is, as best seen in FIGS. 2, 4 and 7 inclined upwardly relative to said cylinder bore from said pump receiving portion toward the upper portion of said cylinder block to facilitate casting of said cylinder block without the formation of unwanted metal voids, as described in Paragraph 0029.

Claim 4 depends on Claim 1 and further recites the "pair of axially extending reinforcing ribs each extending transversely outwardly from a central portion of a respective side of the cylinder block". These are the ribs indicated by the reference numeral 59 and described in Paragraph 0030.

Claim 5 depends on claim 1 and further recites "a plurality of reinforcing ribs formed on opposite sides of said cylinder block each of which is aligned with the axis of a respective one of said cylinder bores". These are the ribs indicated by the reference numerals 61 and described in Paragraph 0030.

Claim 6 depends on Claim 5 and recites the further distinctions mentioned above by reference to claim 4, but does not stand or fall with that claim because of the different dependency.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

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The sole ground to for the Board to decide is whether the Examiner has made out a prima facie case of anticipation of each claim on the reference to Inoue et al published as 2002/0062795, now issued as US Patent 6,530,356 under 35 USC 102(b). It is noted in passing that the Examiner in his final rejection only referred to claims 1-3, initially, but obviously meant claims 1-8.

APPELLANT'S ARGUMENTS

CLAIMS 1-3 ARE NOT ANTICIPATED

It is most respectfully submitted that these claims are not anticipated by Inoue et al because this reference fails to disclose let alone anticipate the concept of having the connecting passage of the water pump outlet with the cylinder pump with the cylinder block cooling jacket "inclined upwardly relative to said cylinder bore from said pump receiving portion toward the upper portion of said cylinder block to facilitate casting of said cylinder block without the formation of unwanted metal voids". In this regard it is first pointed out that the reference not only fails to discuss this problem but also does not show a construction that would solve it.

The Examiner makes reference to FIGS. 1-3 of the reference, but they do not show what is claimed. In fact FIG. 6 of the reference shows the opposite. There the flow arrow shown in phantom clearly goes in a downward direction, thus aggravating not solving the problem.

CLAIM 4 IS NOT ANTICIPATED

Claim 4 depends on claim 1 and still further defines over the reference in reciting "a pair of axially extending reinforcing ribs each extending transversely outwardly from a central portion of a respective side of the cylinder block". The Examiner contends that the ribs 52 of the reference anticipate this. Not so! Although the ribs 52 of the reference are described as reinforcing there are a number of interconnected ribs extending at various angles but not axially.

CLAIM 5 IS NOT ANTICIPATED

Claim 5 depends on claim 1 and still further defines over the reference in calling for "a plurality of reinforcing ribs formed on opposite sides of said cylinder block each of which is aligned with the axis of a respective one of said cylinder bores". Thus the Examiner alleges the ribs 52, which he previously stated were "axially extending" are now aligned with the cylinder bore axes and thus vertical not horizontal. It certainly is clear that none of the ribs 52 of the reference extend in the direction of the cylinder bore axes. Let alone being aligned with them.

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SUMMARY

It is most respectfully submitted that the Examiner has not only failed to make out a prima facie case, but has relied on a reference that is directed toward solving a completely different problem and totally lacks the distinctive features recited in the various claims discussed. Thus a reversal of each applied ground of rejection is respectfully requested.

Respectfully submitted:


Ernest A. Beutler
Reg. No. 19901

Phone (949) 721-1182
Pacific Time

Attachment: Brief Fee Credit Card Authorization

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APPENDIX**CLEAN COPY OF CLAIMS ON APPEAL**

1. A cylinder block for an internal combustion engine having a lower, crankcase receiving portion and an upper, cylinder head receiving portion, at least one cylinder bore formed therein extending between said lower and upper portions and surrounded at least in part by a coolant jacket, and a pump receiving portion formed at one side of said cylinder block and having a communication passage communicating with said cooling jacket formed in said cylinder block, said communication passage having an upper wall that is inclined upwardly relative to said cylinder bore from said pump receiving portion toward the upper portion of said cylinder block to facilitate casting of said cylinder block without the formation of unwanted metal voids.
2. A cylinder block as set forth in claim 1, wherein the communication passage terminates in the cylinder block at the upper end thereof.
3. A cylinder block as set forth in claim 2, wherein the pump comprises an engine coolant pump and the communication passage communicates with the cooling jacket.
4. A cylinder block as set forth in claim 1, further including a pair of axially extending reinforcing ribs each extending transversely outwardly from a central portion of a respective side of the cylinder block.
5. A cylinder block as set forth in claim 1, wherein the cylinder block forms a plurality of axially spaced cylinder bores and further including a plurality of reinforcing ribs formed on opposite sides of said cylinder block each of which is aligned with the axis of a respective one of said cylinder bores.
6. A cylinder block as set forth in claim 5, further including a pair of axially extending reinforcing ribs each extending transversely outwardly from a central portion of a respective side of the cylinder block.
7. A cylinder block as set forth in claim 6, wherein the communication passage terminates in the cylinder block at the upper end thereof.
8. A cylinder block as set forth in claim 7, wherein the pump comprises an engine coolant pump and the communication passage communicates with the cooling jacket.

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COPIES OF EVIDENCE SUBMITTED
AND RELIED UPON BY APPELLANT

None

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COPIES OF DECISIONS
IN RELATED APPEALS AND INTERFERENCES

None